
DESTRUCTION AND NEUTRON CAPTURE CROSS SECTIONS WITH A HIGH SPIN K-ISOMERIC TARGET OF ^{177m}Lu

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High spin K isomeric targets are very interesting to study the induced decay of nuclear states. The techniques used to produce a ^{177m}Lu (23/2-) target consist of an isotopic separation, an irradiation and a chemical separation. The huge neutron flux ($1.8 \times 10^{15} \text{ n cm}^{-2} \text{ s}^{-1}$) of the Grenoble ILL reactor was used to produce the Lu isomer by the $^{176}\text{Lu}(n, \gamma)$ reaction. Thanks to this experiment, we were able to estimate the destruction cross section of the ^{177m}Lu for the first time. This cross section was also measured directly with the target of ^{177m}Lu . Neutron capture cross section measurements were achieved at the reactor (Saclay) and at the ILL reactor. These measurements allow to evaluate the ^{177m}Lu isomer super-elastic scattering cross section. The results of these experiments will be shown in this talk.